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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,963	12/05/2000	Heike Wild	IN-12062	9810

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Basf Corporation
1609 Biddle Avenue
Wyandotte, MI 48192

EXAMINER

BISSETT, MELANIE D

ART UNIT PAPER NUMBER

1711

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,963

Applicant(s)

WILD ET AL.

Examiner

Melanie D. Bissett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6 and 7 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. The double patenting rejections have been withdrawn based on the abandonment of the copending application. However, the rejections based on 35 USC 103 have been maintained.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1, 4, and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy in view of Oertel.
4. From a previous Office action:

Kennedy discloses a composite structure having two outer metal layers and an intermediate elastomer core layer, where the core layer has a modulus of elasticity greater than 250 MPa, tensile and compressive strengths greater than 20 MPa, and an adhesion of at least 3 MPa (abstract). Preferably, the elastomer is compact (col. 2 lines 50-54) and has a modulus of elasticity greater than 275 MPa (col. 3 lines 56-63), an elongation greater than 50% (col. 4 lines 12-15), and an adhesion to the metal layers of at least 6 MPa (col. 4 lines 26-30). Figure 3 shows a structure having two outer metal layers of 10-mm thickness and a core polyurethane layer of 50-mm thickness. Polyurethanes of the invention are made by reacting an isocyanate with a polyether or polyester polyol, thus teaching reaction products of polyether polyols with isocyanates. The reference teaches a method of fabricating the composites by casting or injecting the elastomer into a cavity formed between the two outer metal layers (col. 5 lines 17-21). Thus, the reference teaches a process of preparing polyisocyanate polyaddition products between two metal layers.

Kennedy fails to disclose specific polyether polyol and polyisocyanate components useful in the invention. Oertel describes polyurethane cast elastomers, where diphenylmethane diisocyanate (MDI) is listed as a conventionally used isocyanate for such applications (p. 390, section 8.1.1.1). Oertel teaches that polyisocyanate isomers are mixed to achieve a desired low

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melting point, also teaching that polymeric MDI can be mixed into isocyanate components to lower the melting point of the component without changing isomer content. It is the examiner's position that it would have been prima facie obvious to use a mixture of MDI with polymeric MDI to lower the melting point of the isocyanate component as desired and thus improve processing conditions.

Kennedy applies as above, failing to teach the requirement of fillers in a specified range. However, the reference does indicate that fillers may be included in the elastomer layer to reduce the thermal coefficient and reduce cost of the layer (col. 4 lines 39-46). Therefore, it is the examiner's position that it would have been prima facie obvious to include fillers in any amount necessary to reduce the thermal coefficient and the cost of the elastomer layer.

Allowable Subject Matter

5. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

7. The closest prior art, Kennedy, discloses a composite structure having to outer metal layers and an inner polyurethane elastomer layer. However, the reference does not teach the claimed polyether polyalcohol blend. Although polyether polyols are known reactants in polyurethane elastomers, it is the examiner's position that the claimed polyether polyol blend provides a novel and unobvious step over the closest prior art.

Response to Arguments

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8. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

9. In the present case, the examiner has pointed to the primary reference, which teaches the use of polyether and polyisocyanate reactants to form a polyurethane elastomer layer. The applicant argues that the reference does not teach the claimed polyisocyanate products and gives no guidance to such materials. It is the examiner's position that, since Kennedy only generally discusses the elastomer composition, one of ordinary skill in the art would look to conventional knowledge to determine proper specific reactants for such a material. The examiner has provided a secondary reference, a polyurethane handbook that teaches that the polyisocyanate mixture claimed by the applicants are commonly used in polyurethane elastomer applications. The examiner has provided motivation for using such materials, since Oertel teaches that the mixtures yield low-melting-point reactants that aid processing conditions. This information is taken from the references and not from the applicant's specification.

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Thus, it is the examiner's position that a prima facie case has been properly established.

10. In response to applicant's argument that the melting temperature has nothing to do with the benefits of the applicant's invention, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Oertel teaches that lowering the melting point of the polyisocyanates would improve the processing conditions of the materials. Thus, one skilled in the art would recognize that the use of such polyisocyanates would improve the processing conditions of a polyurethane elastomer material. Since Kennedy is primarily concerned with elastomer materials, one skilled in the art would recognize that the use of such polyisocyanates would improve the processing conditions of Kennedy's invention. The resulting composite would represent the claimed material.

11. Regarding the applicant's arguments that Oertel "lists an entire page full of isocyanates and diisocyanate that may find some use in some elastomer formation process", it is noted that Oertel teaches that the most conventional polyurethane elastomers are based on MDI or TDI. MDI is conventionally sold as an isomeric mixture. Oertel teaches two modifications to the MDI mixture, where one is the inclusion of polymeric MDI. Oertel also gives a short list of additional isocyanates that are used in specific applications. Undue experimentation would not be necessary to choose from this short list, where MDI-based isocyanates are one of the two most

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conventional isocyanates used. Regardless, the reference specifically teaches the advantages of the polymeric MDI mixture. It has been the examiner's position that, from Oertel's teaching, it would have been prima facie obvious to use a polymeric MDI mixture to lower the melting point and improve processing conditions.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone

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number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb



James J. Scifres
Supervisory Patent Examiner
Technology Center 1711